
IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

PATENT

In re application of: Poon et al.

Attorney Docket No.: NRCAP003

Application No.: Unknown

Examiner: Unknown

Filed: Herewith

Group: Unknown

Title: DUAL FORCE MODE FINE STAGE
APPARATUS

CERTIFICATE OF EXPRESSMAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service "Express Mail Post Office To Addressee" Service under 37 CFR § 1.10 Mail to: Assistant Commissioner for Patents, Washington, DC 20231 on June 6, 2001.

Signed: _____

Jack Limper

PRELIMINARY AMENDMENT

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

Prior to subsequent examination of the above-referenced U.S. Patent Application, please enter the following amendments and remarks.

IN THE SPECIFICATION:

Please replace the paragraph beginning on page 3 at line 16 with the following:

Conventionally, increasing the throughput requirements of a reticle scanning stage may cause the accuracy associated with the reticle scanning stage to be compromised, as actuators which are capable of higher accelerations are generally more difficult to control and, hence, less accurate. In addition to being less accurate, it is also difficult to position large actuators such that a line of force associated with the actuators may cross through the center of gravity. When the line of force is not through the center of gravity of the fine stage, then a substantial "balancing mass" is required to balance the overall stage. The use of such a balancing mass may further increase the size of the

overall stage. To increase the accuracy associated with a reticle scanning stage and to substantially minimize the size of the reticle scanning stage, smaller, more controllable actuators may be used with the reticle scanning stage, at the expense of acceleration capabilities.

Please replace the paragraph beginning on page 8 at line 16 with the following:

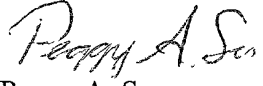
Fig. 5b is a diagrammatic representation of a coarse stage and a fine stage, *i.e.*, coarse stage 506 and fine stage 510 of Fig. 5a, when the coarse stage is either moving at a constant velocity in a positive y-direction or in a stationary position in accordance with an embodiment of the present invention.

REMARKS

The Specification has been amended to correct inconsistencies and to provide clarity.

In view of the above, the Applicants believe that all pending claims are allowable and respectfully request a Notice of Allowance for this application from the Examiner. Should the Examiner believe that a telephone conference would expedite the prosecution of this application, the undersigned can be reached at the telephone number set out below. If any fees are due in connection with the filing of this amendment, the Commissioner is authorized to charge such fees to Deposit Account 50-1652 (Order No. NRCAP003).

Respectfully submitted,
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APPENDIX

VERSION WITH MARKINGS TO SHOW CHANGES MADE

The paragraph beginning on line 16 of page 3 was replaced with the following:

Conventionally, increasing the throughput requirements of a reticle scanning stage may cause the accuracy associated with the reticle scanning stage to be compromised, as actuators which are capable of higher accelerations are generally more difficult to control and, hence, less accurate. In addition to being less accurate, it is also difficult to position large actuators such that a line of force associated with the actuators may cross through the center of [a reticle] gravity. When the line of force is not through the center of gravity of the fine stage, then a substantial "balancing mass" is required to balance the overall stage. The use of such a balancing mass may further increase the size of the overall stage. To increase the accuracy associated with a reticle scanning stage and to substantially minimize the size of the reticle scanning stage, smaller, more controllable actuators may be used with the reticle scanning stage, at the expense of acceleration capabilities.

The paragraph beginning on line 16 of page 8 was replaced with the following:

Fig. 5b is a diagrammatic representation of a coarse stage and a fine stage, *i.e.*, coarse stage 506 and fine stage 510 of Fig. 5a, when the coarse stage is [accelerating] either moving at a constant velocity in a positive y-direction or in a stationary position in accordance with an embodiment of the present invention.